

Abstract of the Disclosure

Method and apparatus are described for anticipating the number of leading zeros or leading ones in a sum of mantissas irrespective of the sign of the result or the relative magnitudes of the input operands using a leading zero anticipation (LZA) device. An algorithm is presented for leading zero and leading one anticipation that may be used to remove leading zeroes or ones from sums produced in arithmetic units. This algorithm and the design of the combinational logic does not require a comparison of input operands nor does it need two separate counters for leading zeros and leading ones as in most other LZAs. The present invention is especially applicable to redundant format addition.